



STATE OF MARYLAND

DMMH

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June 4, 2010

Public Health & Emergency Preparedness Bulletin: # 2010:21 Reporting for the week ending 05/29/10 (MMWR Week #21)

CURRENT HOMELAND SECURITY THREAT LEVELS

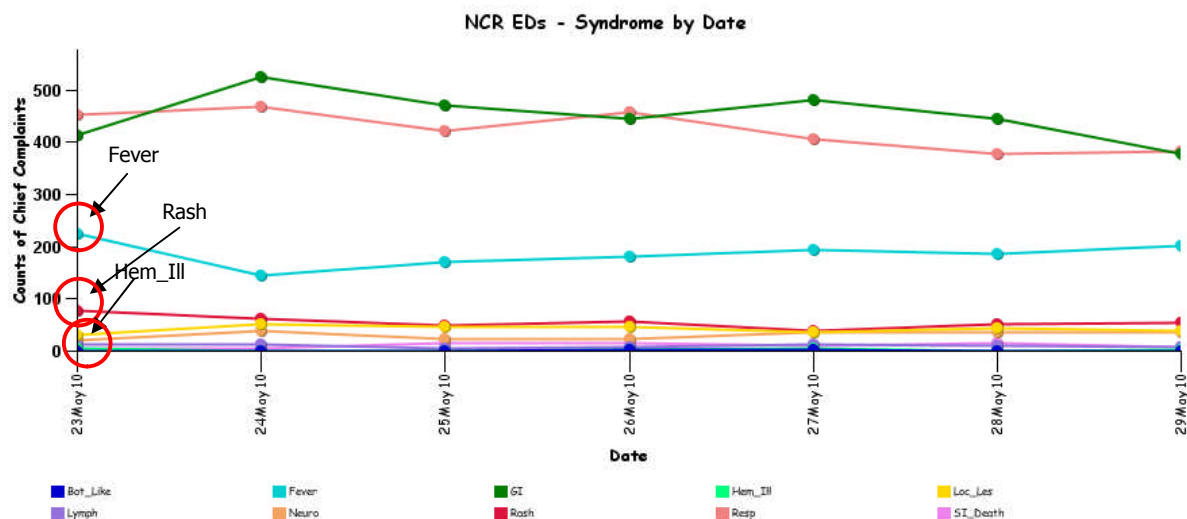
National: Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)
Maryland: Yellow (ELEVATED)

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

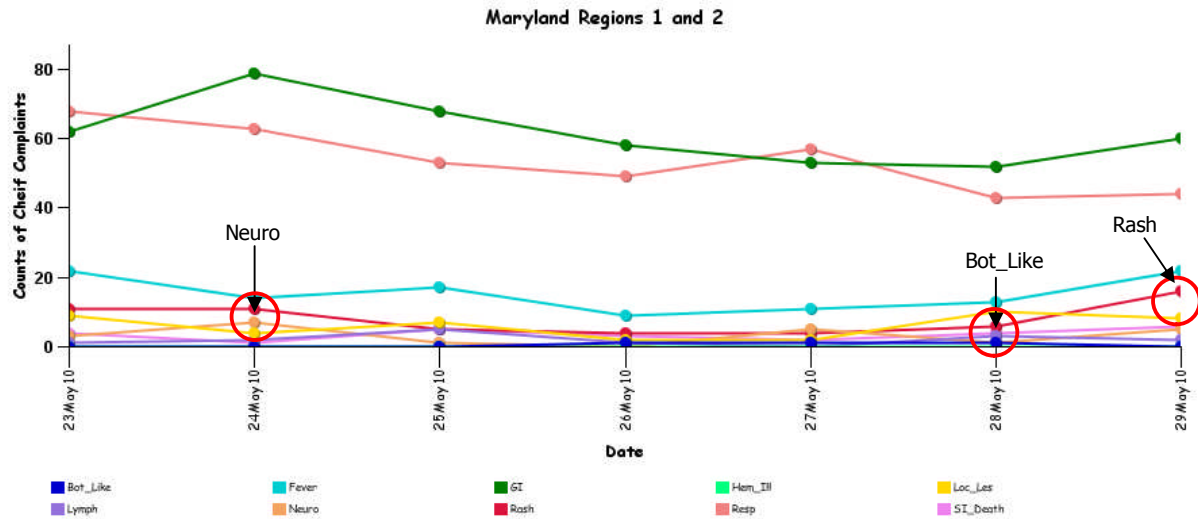
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

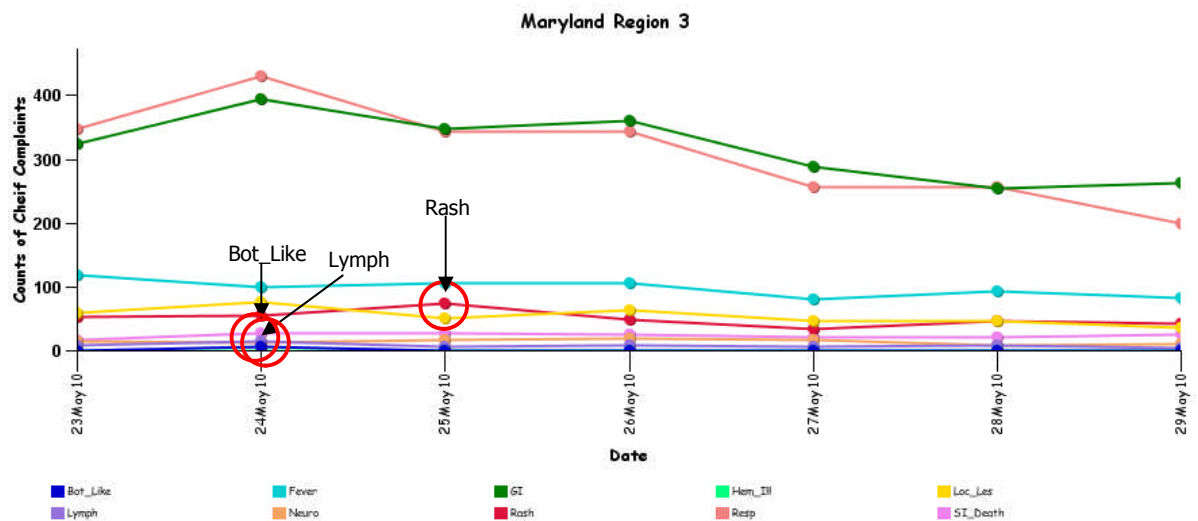


* Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

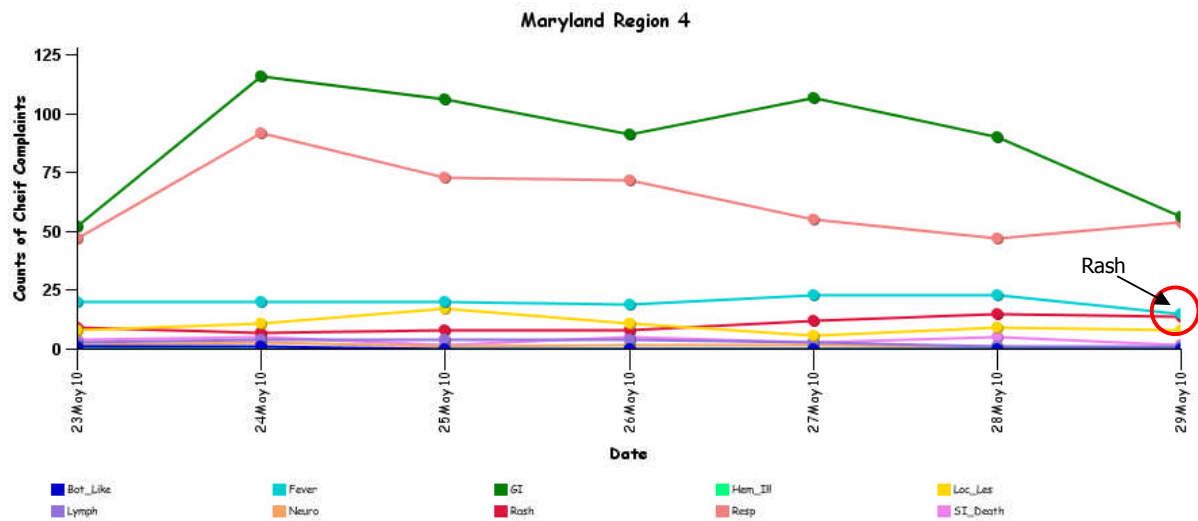
MARYLAND ESSENCE:



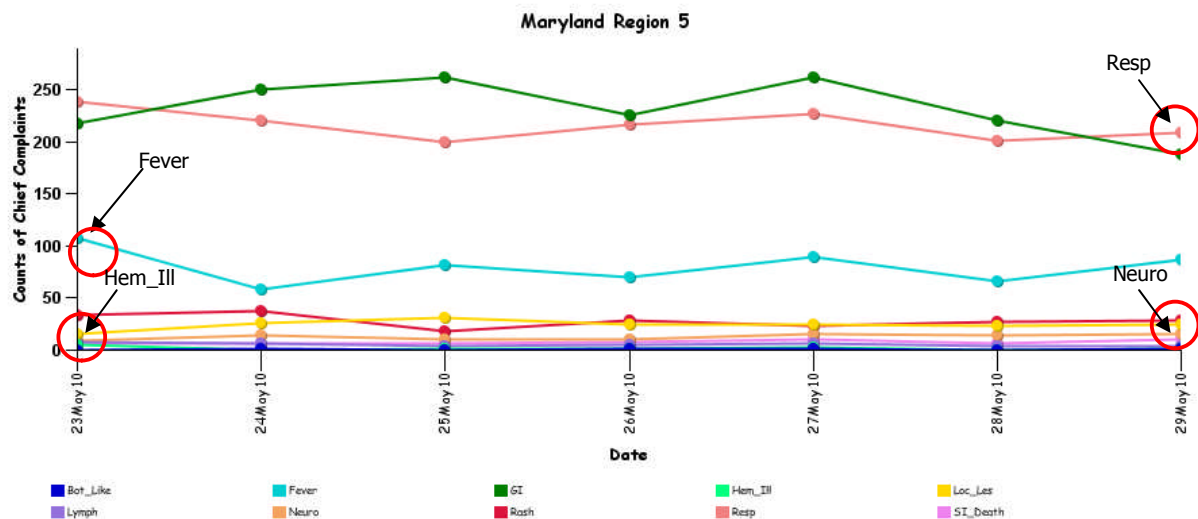
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore city, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



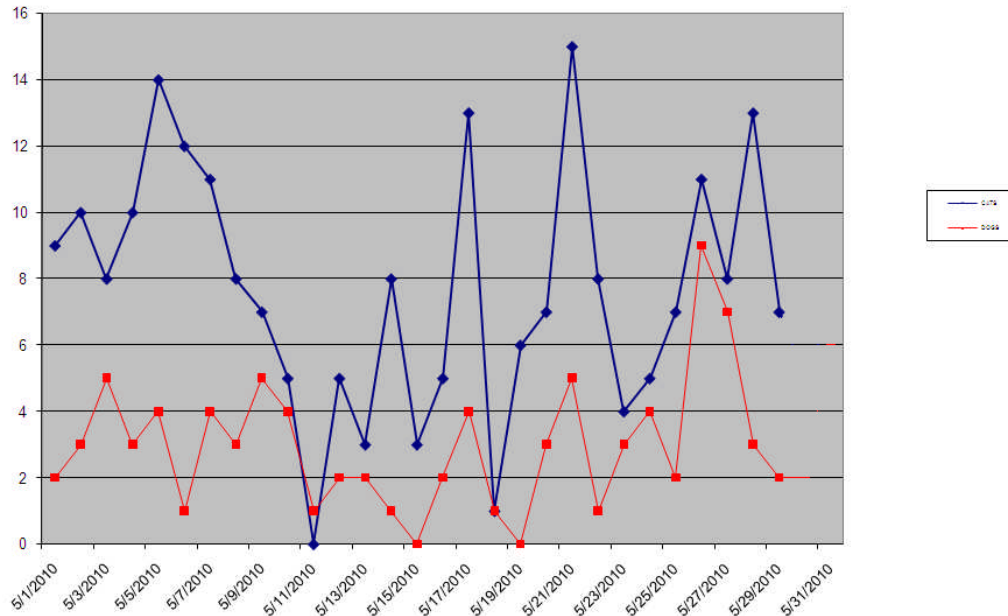
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT: No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.

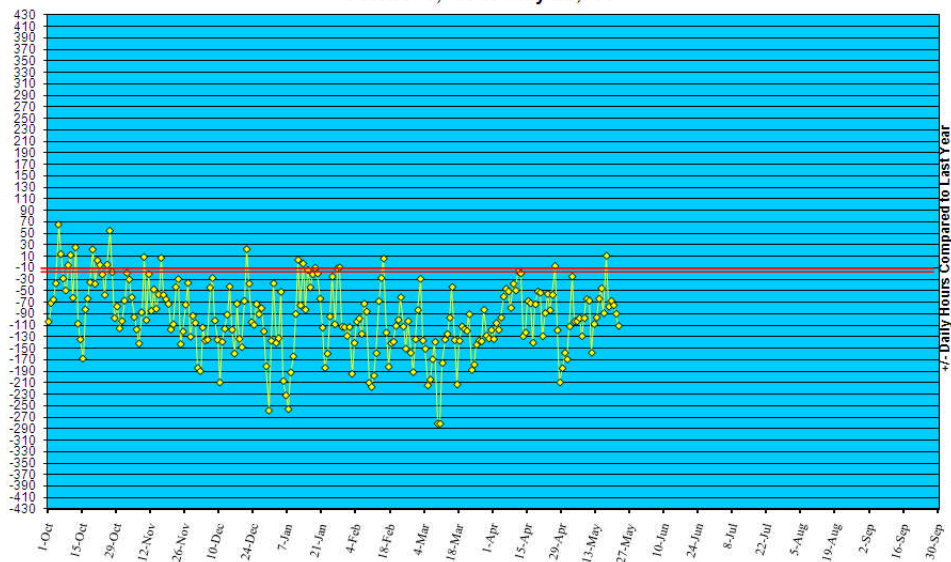
Dead Animal Pick-Up Calls to 311



REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/09.

**Statewide Yellow Alert Comparison
Daily Historical Deviations
October 1, '09 to May 22, '10**



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in April 2010 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (May 23 - May 29, 2010):	13	0
Prior week (May 16 - May 22, 2010):	09	0
Week#21, 2009 (May 24- May 30, 2009):	10	0

2 outbreaks were reported to DHMH during MMWR Week 21 (May 23-29, 2010)

1 Foodborne outbreak

1 outbreak of GASTROENTERITIS/FOODBORNE associated with a School

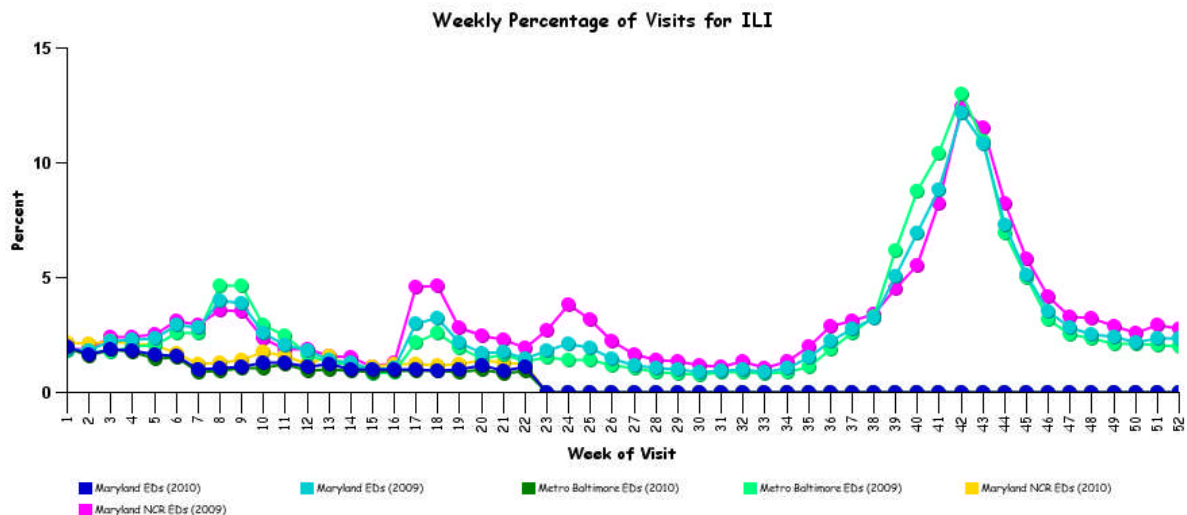
1 Rash illness outbreak

1 outbreak of FIFTH DISEASE in a Daycare

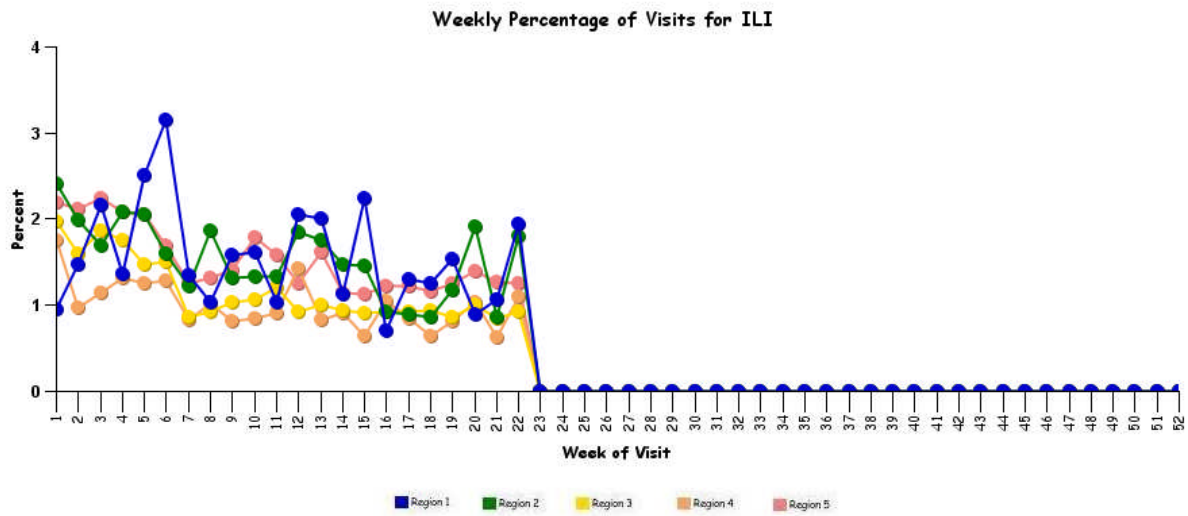
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



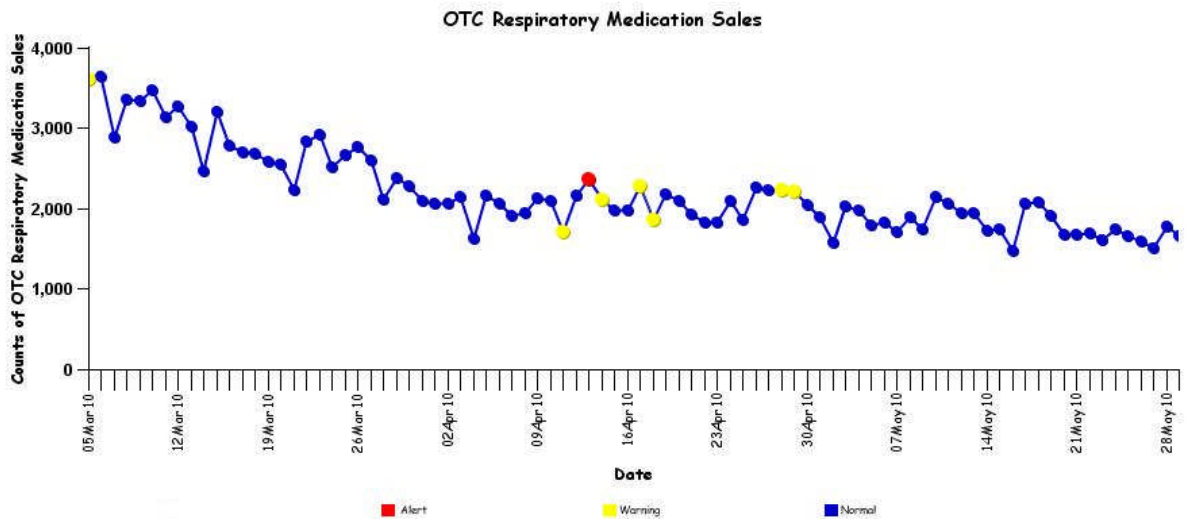
* Includes 2009 and 2010 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2010 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE:

WHO Pandemic Influenza Phase: Phase 6: Characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way. Definition of Phase 5 is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

US Pandemic Influenza Stage: Stage 0: New domestic animal outbreak in at-risk country

****More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at:**
[http://bioterrorism.dhmm.state.md.us/Documents/Plans/PandemicInfluenzaResponseAnnex\(Vers7.3\).pdf](http://bioterrorism.dhmm.state.md.us/Documents/Plans/PandemicInfluenzaResponseAnnex(Vers7.3).pdf)

AVIAN INFLUENZA-RELATED REPORTS:

WHO update: As of May 06, 2010, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 498, of which 294 have been fatal. Thus, the case fatality rate for human H5N1 is about 59%.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA PANDEMIC, INDIAN VARIANTS (H1N1): 25 May 2010, The National Institute of Virology (NIV) here has detected 3 new variants of the H1N1 virus. Fortunately, all 3 variants have shown susceptibility to Tamiflu, the drug used in the treatment of swine flu. However, with the virus actively acquiring new properties, NIV scientists are apprehensive that it might develop resistance to the medicines used in treating swine flu. "For now, there is no need to worry. But we are closely monitoring the virus for any change in its virulence," NIV assistant director Sarah Cherian told the Times of India recently. Cherian said 7 mutated variants of the virus have been found across the world so far. "As expected of the seasonal influenza virus, the H1N1 virus is also going through constant genetic variations which might lead to significant changes in its antiviral resistance," she said. The variants of the H1N1 virus, representing both recovered and fatal cases from major cities -- Pune, Mumbai, Delhi, Hyderabad and Bangalore -- were analysed at the NIV, and the complete genomes of these variants were sequenced. The results of the genetic analysis have been published in the March 2010 issue of the US journal, PLOS One. The NIV study, which compared the Indian viruses with 685 whole genomes of global viral isolates, revealed that the 1st Indian isolate of May 2009 belonged to a subtype (clade 5) and correlated to the time during which the dissemination of the virus was noted in Asia. The later isolates of the period from June to September 2009 belonged to H1N1 variants (clades 6 and 7). The clade 7 variant was seen to be the dominant one, though no spatio-temporal patterns were noted within this variant, said Cherian. Among the established pathogenic markers, no significant change was observed in the Indian variants of the H1N1 virus.

Resources:

<http://www.cdc.gov/h1n1flu/>

<http://www.dhmm.maryland.gov/swineflu/>

NATIONAL DISEASE REPORTS

E. COLI VTEC NON-O157, O145, LETTUCE (USA): 28 May 2010, For nearly 2 decades, public enemy no. 1 for the food industry and its government regulators has been a virulent strain of *E. coli* that has killed hundreds of people, sickened thousands and prompted the recall of millions of pounds of hamburger, spinach, and other foods. But as everyone focused on controlling that particular bacterium, known as *E. coli* O157:H7, the rarer strains of toxin-producing *E. coli* were largely ignored. Collectively, those other strains are now emerging as a serious threat to food safety. In April 2010, romaine lettuce tainted with one of them sickened at least 26 people in 5 states, including 3 teenagers who suffered kidney failure. Although the federal government and the beef and produce industries have known about the risk posed by these other dangerous bacteria for years, regulators have taken few concrete steps to directly address it or even measure the scope of the problem. For 3 years, the United States Department of Agriculture (USDA) has been considering whether to make it illegal to sell ground beef tainted with these lesser-known *E. coli* strains, which would give them the same outlaw status as their more famous cousin. The meat industry has resisted the idea, arguing that it takes other steps to keep *E. coli* out of the beef supply and that no outbreak involving the rarer strains has been definitively tied to beef. The severity of the April 2010 outbreak is spurring a reassessment. "This is something that we really have to look at," said Senator Kirsten Gillibrand, Democrat of New York, who plans to introduce a bill that would pre-empt the Agriculture Department by declaring a broad range of disease-causing *E. coli* to be illegal in ground beef and requiring the meat industry to begin testing for the microbes. "How many people do we have to see die or become seriously ill because of food poisoning?" The issue will be one of the first faced by President Obama's nominee to head the department's food safety division, Dr Elisabeth Hagen, who is scheduled to testify in her Senate confirmation hearing. Part of the problem is that so little is known about the rarer *E. coli* strains, which have been called the "big 6" by public health experts. (The term refers to the fact that, after the O157

strain, these 6 strains are the most common of a group of toxin-producing *E. coli*.) Few food companies test their products for the 6 strains, many doctors do not look for them and only about 5 percent of medical labs are equipped to diagnose them in sick patients. A physiological quirk of *E. coli* O157 makes it easy to test for in the lab, and many types of food are screened for it. The other *E. coli* strains are harder to identify and testing can be time-consuming. The USDA has been working to develop tests that could be used in meat plants to rapidly detect the pathogens. The lettuce linked to the April 2010 outbreak tested negative for the more famous form of *E. coli*, but no one checked it for the other strains, according to the Ohio company that processed it, Freshway Foods. It turned out that the romaine was infected with *E. coli* O145, one of the 6 strains. Earthbound Farm, the nation's largest producer of organic salad greens, is one of the few companies that does screen for the full range of toxin-producing *E. coli*, and it has found a worrisome incidence of the rarer strains. Out of 120 000 microbial tests in 2009, about 1 in 1000 showed the presence of unwanted microbes, mostly the 6 strains. "No one is looking for non-O157 to the level we are," said Will Daniels, Earthbound Farm's senior vice president for food safety. "I believe it is really going to emerge as one of the areas of concern." Earthbound Farm was not involved in the April outbreak. Data from the Centers for Disease Control and Prevention showed at least 10 food-borne outbreaks from 1990 to 2008 involving the 6 strains, carried in foods like salad or strawberries. Investigators suspected ground beef as the cause of a 2007 outbreak in North Dakota, but the link was not confirmed. The April 2010 outbreak is a signal of a broader problem, said Michael R Taylor, deputy commissioner for foods at the FDA. (Food Safety Threats are listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

SALMONELLOSIS, UNPASTEURIZED MILK (MINNESOTA): 27 May 2010, A Minnesota toddler has been hospitalized with a life-threatening illness and 3 other people have been sickened by *E. coli*-tainted raw milk, an outbreak that is likely to sharpen a national debate on the growing popularity of the controversial beverage. 3 of the 4 *E. coli* cases are linked to unpasteurized milk produced at the Hartmann Dairy Farm in Gibbon, Minnesota, which is also known as MOM, or Minnesota Organic Milk, state health and agricultural department officials said Wednesday, 26 May 2010. They said consumers should discard any dairy products, including cheese and ice cream, made by Hartmann. Of the 4 cases of *E. coli* O157:H7, 2 were reported in the metro area, the other 2 in outstate counties, state officials said. None of the milk involved so far appears to have been sold in stores, said Heidi Kassenborg, the Minnesota Department of Agriculture's director of dairy and food inspection. Raw milk hasn't been pasteurized, that is, treated with heat to kill organisms that can make people sick. Interstate sales of raw milk are banned, but more than 20 states allow sales, usually limited, of the product. In Minnesota, raw milk is restricted to "occasional purchases directly at the farm where the milk is produced," Kassenborg said. Raw milk is roundly condemned by public health authorities because it can carry dangerous bacteria such as *E. coli*, *Salmonella*, and *Campylobacter*. But there is a growing movement of raw milk advocates who believe the drink has health benefits, and that they should have the right to drink it. Last week [week of 17 May 2010] Wisconsin Gov. Jim Doyle vetoed a bill that would have allowed limited sales of raw milk, irking raw milk supporters but winning praise from food safety advocates. Each year, several dozen people are usually sickened by raw milk in Minnesota. But this is the 1st outbreak, 2 or more cases that are linked, in at least 15 years, Health Department officials say. "The fact is, raw milk is unsafe to drink, and that's unfortunately been evidenced by the outbreak we've seen" in Minnesota, Kassenborg said. Assistant state epidemiologist Richard Danila said the Health Department found 4 cases of *E. coli* O157:H7 between 1 and 21 May 2010, all of which had the same DNA fingerprint. 2 of those sickened were school-age children, 1 was a man who was at least 70 years old, and the 4th was a toddler. All 4 were hospitalized: 1 overnight, 2 for 4 days, and the other, the toddler, is still in the hospital after being admitted late last week [week of 17 May 2010]. According to the Health and Agriculture Departments [the man who] operates the farm, couldn't be reached for comment. A parent of 1 of the sickened children told state investigators that he or she didn't realize the Hartmann milk was raw milk. The parents of the toddler with HUS [hemolytic uremic syndrome] knew they were buying raw milk, it was said, adding that doesn't necessarily mean they understood it was unpasteurized and potentially unhealthy. The toddler's parents were characterized as "distracted." State officials aren't sure where the Hartmann raw milk was purchased. But some of it may have been purchased at a metro-area "pickup point," Danila said without elaborating. One Hartmann Dairy customer, a south Minneapolis resident, said she picks up raw milk weekly at a neighbor's house through a "milk club." Several families belong, and pay Hartmann directly. The arrangement appears to be common. The state revoked Hartmann Dairy Farm's license to produce Grade A milk in 2001 for "general unsanitary conditions," Kassenborg said. (Food Safety Threats are listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

EASTERN EQUINE ENCEPHALITIS (FLORIDA): 27 May 2010, The Marion County Health Department has confirmed the 1st positive case of eastern equine encephalitis (EEE) this year [2010]. It was present in a horse in the northwest area of the county. EEE is a mosquito-borne virus that can be transmitted to humans and horses by the bite of an infected mosquito. The Health Department advises the public to remain diligent in mosquito protection efforts, including the "5 D's" for prevention: Dusk and dawn: avoid being outdoors when mosquitoes are most active; dress: wear clothing that covers skin; DEET: repellents containing DEET (N,N-diethyl-meta-toluamide, or N,N-diethyl-3-methylbenzamide) are recommended as are picaridin and oil of lemon eucalyptus and drainage: check homes to rid areas of standing water where mosquitoes can lay eggs. (Viral Encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

CHIKUNGUNYA (AFRICA:GABON): 29 May 2010, An outbreak of chikungunya [virus] was reported in April [2010] in south-eastern Gabon, which has also recorded cases of dengue fever, which caused no deaths, officials said Friday [28 May 2010], at the Centre International de Recherches Medical (CIRMF). The 1st cases of chikungunya emerged early April [2010] in the region of Ogooue-Lolo and late April in the Haut-Ogooue, Franceville, which is the county seat, said Dr. Eric Leroy, a researcher at CIRMF where samples were analyzed at the request of health authorities. He said out of 608 total samples studied in 3 weeks (3-23 May[2010]) for the area of Franceville only, the researchers found 298 cases of chikungunya and 82 cases of dengue fever, 2 diseases of viruses are transmitted by mosquitoes. In a report on the situation of both diseases in Franceville, CIRMF believes that

"the epidemic of chikungunya is coming to an end, in 3-4 weeks." Among the positive cases 15 were "doubly infected with both viruses which is exceptional. Their lives were not endangered but their condition required hospitalization," Dr Leroy said. "Only 7 cases were found in 2007 when the epidemic hit Libreville." In Franceville the epidemic of chikungunya affects other localities of Upper Ogooue (Moanda, Mounana, Okondja) and Ogooue-Lolo (Koulamoutou Lastourville) but no statistics will be released until Friday [29 May 2010] to determine the magnitude (of the epidemics) in the absence of "systematic sampling." "As of today, there have been no deaths. The trend is stabilizing or even declining," assured his [Dr Eric Leroy's] aide Norbert Mouyabi, Head of Communication CIRMF. A person with chikungunya [virus infection] has the same symptoms as the flu: fever over 38 degrees, muscle aches, joint pain, haemorrhage or headache. (Emerging Infectious Diseases are listed in Category C on the CDC list of Critical Biological Agents) *Non-suspect case

BRUCELLOSIS, BOVINE (CANADA): 28 May 2010, A contagious disease that causes cows to spontaneously abort their calves has been detected in 3 [British Columbia] animals sent to a US slaughterhouse. Rob McNabb, spokesman for the Canadian Cattlemen's Association, said [Wed 26 May 2010] the cows that had brucellosis came from herds on 2 farms. He said the last case of brucellosis, which is mostly transmitted from cows to calves through milk or birth fluids, occurred in Canada in 1989. Mr. McNabb said the Canadian Food Inspection Agency will likely confirm the US results, but additional testing is being done because false positive tests have been a problem in the past. Keith Lehman, a spokesman for the agency, said the unidentified farms have been quarantined and blood samples taken from their herds to determine if any of the animals have the disease. He said preliminary results could be completed by next week [week of 31 May 2010]. But meanwhile, the agency continues investigating the movement of cattle to and from the farms in an effort to determine the origin of the brucellosis. It's not known why the disease would make a comeback after it was thought to have been eradicated 20 years ago. "We worked very hard, probably in the mid-1900s to the later 1900s, at eradicating brucellosis from the Canadian herd and that was done through a slaughter and testing program," Mr. Lehman said. People can contract undulant fever [brucellosis in humans] by drinking unpasteurized milk from infected cows or through contact with animal tissue during the slaughter process if good sanitary measures aren't used, Mr. Lehman said. Symptoms include joint and muscle pain. (Brucellosis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, HUMAN, (COLOMBIA): 26 May 2010, Authorities in the north-west Colombian department of La Guajira declared a state of emergency on Tuesday [25 May 2010] following an outbreak of the infectious disease anthrax in the department's capital city Riohacha. So far, 77 people in La Guajira are known to have developed skin lesions, one of the symptoms of anthrax contagion. Of these, doctors have confirmed 3 cases. According to authorities, 2 people so far have died from the disease. Due to the outbreak, goat slaughterhouses in the region have been closed, in the hope of preventing the spread of anthrax. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

UNDIAGNOSED FATALITIES, INFANTS (SUDAN): 25 May 2010, The death toll from a yet identified fever has risen to 107 infants in Nyala, South Darfur State. Between March and May [2010], 988 babies have been infected with the raging fever which can inflict death within 48 hours of delivery. Miraya's correspondent in Nyala toured the town's main hospital and described the situation as catastrophic, observing that 2 to 3 newborn babies share a bed. Lacks of air-conditioning coupled by Nyala's scorching temperatures have aggravated the overcrowded hospital, causing a stench to pervade the wards. Speaking to Radio Miraya, Head of Nyala hospital, Dr Mubarak Abdelrahman, said that pollution in the area surrounding the birth centres or homes, polluted water, or temperature rises could be some probable causes of the yet unidentified fever. According to Miraya correspondent in Nyala, the State health authorities have requested the Federal Minister of Health, United Nations Children's Fund (UNICEF), and the World Health Organization (WHO) to assist in identifying the disease. (Emerging Infectious Diseases are listed in Category C on the CDC list of Critical Biological Agents) *Non-suspect case

BOTULISM, SOYBEAN PRODUCTS SUSPECTED: (TAIWAN): 24 May 2010, Botulism is suspected to be responsible for the recent illness of 2 Taipei County women after the bacteria claimed a life in the county in April 2010. The women, a 53-year-old mother and her daughter-in-law aged 38, were hospitalized 18 and 20 May 2010, respectively, after developing symptoms, officials of the county's Public Health Bureau said Saturday [22 May 2010]. Suspecting botulism, a notifiable disease, the hospital reported the case to the Department of Health (DOH), which then informed the county bureau. Huang Ching-yao, a technical specialist at the bureau, said the women had eaten soybean products packed in airtight bags, including dried beancurd and vegetarian meat produced by a Taoyuan County-based factory, the same factory whose products were blamed for the April 2010 case. This was later confirmed by DOH official Tsai Shu-chen. Tsai said the factory had been ordered to recall all the processed foods it had made under contract. Meanwhile, DOH infection for Disease Control Deputy Director-General Lin Ting said preliminary lab test results showed a high possibility of botulism infection in the mother, although initial tests on the other woman were less conclusive. (Botulism is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmm.maryland.gov/>

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your

organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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